IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1.   (Currently Amended)   An apparatus for packetizing a coded bitstream of digital data in accordance with a transport protocol comprising:

time information generating means of generating [[the]] a time information in accordance with a specification of said transport protocol;

header generating means of generating a header [[with]] including said time information generated by said time information generating means; and

packet generating means of generating a packet with ~~adding~~ said header generated by said header generating means and added into every predetermined unit of said bitstream[[.]],

wherein order and bytes of every predetermined unit are counted and used in generating the time information.

2.   (Previously Presented)   The apparatus as claimed in claim 1,

wherein said coded bitstream of digital data is MPEG4 stream, and

wherein said packet generated by said packet generating means is MPEG2-PES packet.

3.   (Previously Presented)   The apparatus as claimed in claim 1, further comprising:

header detecting means of detecting a header from the coded bitstream of digital data; and

header analyzing means of analyzing said header detected by said header detecting means to obtain predetermined information therefrom,

wherein said time information generating means generates said time information in accordance with the specification of said transport protocol using said predetermined information obtained by said header analyzing means.

4.		(Previously Presented)		The apparatus as claimed in claim 1, further comprising bit rate calculating means of calculating a bit rate of the coded bitstream of digital data,

wherein said time information generating means generates said time information in accordance with said specification of said transport protocol using said bit rate calculated by said bit rate calculating mean.

5.		(Previously Presented)The apparatus as claimed in claim 1, wherein said time information generating means generates said time information in accordance with the specification of said transport protocol using the time information contained in a predetermined bitstream other than said coded bitstream of digital data.

6.		(Previously Presented)		The apparatus as claimed in claim 5,

wherein said coded bitstream of digital data is MPEG4 stream and

wherein said packet generated by said packet generating means is MPEG2-PES

packet.

7.   (Previously Presented)   The apparatus as claimed in claim 1, further

comprising an encoder for generating said coded bitstream of digital data,

            wherein said time information generating means generates said time information

in accordance with said specification of said transport protocol using information from said

encoder.

8.   (Previously Presented)   The apparatus as claimed in claim 7, further

comprising a decoder for decoding said coded bitstream of digital data,

            wherein said information from said encoder is information concerning said

decoder.

9.   (Previously Presented)   The apparatus as claimed in claim 7, wherein said

information from said encoder is information concerning said coded bitstream of digital data.

10.   (Previously Presented)   The apparatus as claimed in claim 1, wherein the

time information generating means generates said time information in accordance with said

specification of said transport protocol using maximum bit rate of said coded bitstream of digital

data.

11.   (Currently Amended) The apparatus as claimed in claim 1, further

comprising[[;]]:

          a stream analyzer of analyzing said coded bitstream of digital data;

          a decoder of decoding at least said coded bitstream of digital data; and

          an arithmetic means of performing arithmetic operation on time until said decoder

starts decoding said bitstream on the basis of a result of the analysis of said stream analyzer,

          wherein said time information generating means generates said time information

in accordance with said specification of said transport protocol using an arithmetic result of said

arithmetic means.

12.   (Currently Amended) An apparatus for packetizing a plurality of coded bitstreams

for digital data in accordance with respective transport protocols comprising:

          a plurality of time information generating means each for generating time

information in accordance with a specification of each of said transport protocols;

          a plurality of header generating means each for generating a header [[with]]

including a plurality of pieces of time information generated by said plurality of time information

generating means; and

          a plurality of packet generating means each for generating a packet with ~~adding~~

the header generated by said plurality of header generating means <u>and added</u> into every

predetermined unit of said plurality of bitstreams,

          wherein said plurality of time information generating means generates time

information in accordance with a specification of each of the transport protocols using common

time information.

13.   (Previously Presented)   The apparatus as claimed in claim 12,

            wherein said coded bitstream of digital data is MPEG4 stream, and

            wherein said packet generated by said packet generating means is MPEG2-PES

packet.

14.   (Currently Amended)   A method of packetizing a coded bitstream of

digital data in accordance with a transport protocol comprising:

            a first step of generating said time information in accordance with a specification

of said transport protocol;

            a second step of generating a header [[with]] including said time information

generated during the first step; and

            a third step of generating a packet with adding said header generated during the

second step and added into every predetermined unit of said bitstream[[.]],

            wherein order and bytes of every predetermined unit are used in generating the

time information.

15.   (Previously Presented)   The method as claim 14,

            wherein said coded bitstream of digital data is MPEG4 stream, and

            wherein said packet generated by said third step is MPEG2-PES packet.

16.   (Currently Amended) The method as claimed in claim 14, further comprising:

a forth [[stop]] <u>step</u> of detecting a header from said coded bitstream of digital

data; and

a fifth step of analyzing said header detected during said forth step to obtain

predetermined information therefrom,

wherein in said first step, said time information in accordance with the

specification of said transport protocol is generated using said predetermined information

obtained during said fifth step.

17.   (Previously Presented)   The method as claimed in claim 14, further

comprising forth step of calculating a bit rate of said coded bitstream of digital data,

wherein in said first step, said time information in accordance with said

specification of said transport protocol is generated using said bit rate calculated during said

forth step.

18.   (Previously Presented)   The method as claimed in claim 14, wherein in said

first step, said time information in accordance with said specification of said transport protocol is

generated using time information contained in a predetermined bitstream other than said coded

bitstream of digital data.

19.   (Previously Presented)   The method as claimed in claim 18,

wherein said coded bitstream of digital data is MPEG4 stream, and

wherein said predetermined bitstream is MPEG2-PES packet stream.

20.   (Previously Presented)   The method as claimed in claim 14, wherein in said

first step, said time information in accordance with said specification of said transport protocol is

generated using information from an encoder for generating said coded bitstream of digital data.

21.   (Previously Presented)   The method as claimed in claim 20, wherein said

information from said encoder is information concerning a decoder for decoding said coded

bitstream of digital data.

22.   (Previously Presented)   The method as claimed in claim 20, wherein said

information from said encoder is information concerning said coded bitstream of digital data.

23.   (Previously Presented)   The method as claimed in claim 14, wherein in said

first step, said time information in accordance with said specification of said transport protocol is

generated using maximum bit rate of said coded bitstream of digital data.

24.   (Previously Presented)   The method as claimed in claim 14, further

comprising:

          a forth step of analyzing said coded bitstream of digital data; and

          a fifth step of performing arithmetic operation on time until said decoder for

decoding at least said coded bitstream of digital data starts decoding said bitstream on the basis

of a result of said forth step,

          wherein in said first step, said time information in accordance with said

specification of said transport protocol is generated using an arithmetic result of said fifth step.

25.   (Currently Amended) A method of packetizing a plurality of coded bitstreams of digital data in accordance with respective transport protocols comprising:

a first step of generating a plurality of pieces of time information in accordance with a specification of each of said transport protocols;

a second step of generating a plurality of headers [[with]] including a plurality of pieces of time information generated during said first step; and

a third step of generating a plurality of packets with ~~adding~~ the headers generated during said second step and added into every predetermined unit of said plurality of bitstreams,

wherein in said first step, said plurality of pieces of said time information in accordance with a specification of each of the transport protocols is generated using common time information.

26.   (Previously Presented)   The method as claimed in claim 25, wherein said coded bitstream of digital data is MPEG4 stream, and wherein said packet generated during said third step is MPEG2-PES packet.

27.   (Currently Amended) An apparatus for packetizing a coded bitstream of digital data in accordance with a transport protocol comprising:

storing means of storing ~~said coded bitstream~~ every predetermined unit of said coded bitstream;

time information generating means of generating time information <u>for </u>every said predetermined unit, said time information being necessary for a synchronous transport in accordance with said transport protocol; and

packet generating means of generating a packet with ~~adding~~ said time information generated by said time information generating means <u>and added </u>into every said predetermined unit stored in said storing means[[.]]<u>,</u>

<u>wherein order and bytes of every predetermined unit are used in generating the</u> <u>time information.</u>

28.   (Currently Amended) An apparatus for packetizing an MPEG4 stream in accordance with a specification of an MPEG2-PES stream protocol comprising:

storing means of storing ~~said MPEG4 stream~~ every predetermined unit of said MPEG4 stream;

time information generating means of generating time information <u>for </u>every said predetermined unit of said MPEG4 stream, said time information being required to transport the bitstream in accordance with an MPEG2-PES stream protocol; and

packet generating means of generating a packet with ~~adding~~ said time information generated by said time information generating means <u>and added </u>into every said predetermined unit of said MPEG4 stream stored in said storing means[[.]]<u>,</u>

<u>wherein order and bytes of every predetermined unit are used in generating the</u> <u>time information.</u>

29.   (Previously Presented)   The apparatus as claimed in claim 27, wherein said

time information generating means generates said time information using time information

embedded in a separate packet stream from said packet stream synchronously transported in

accordance with said transport protocol.

30.   (Previously Presented)   The apparatus as claimed in claim 28, wherein said

time information generating means generates said time information using time information

embedded in a separate MPEG2-PES stream.

31.   (Currently Amended)   An apparatus for packetizing an MPEG4 stream in

accordance with a specification of an MPEG2-PES stream protocol comprising:

          storing means of storing said MPEG4 stream every predetermined unit of said

MPEG4 stream;

          detecting means of detecting information from said MPEG4 stream, said

information being required to generate said time information required when said MPEG2-PES

stream is transported;

          time information generating means of generating said time information for every

said predetermined unit of said MPEG4 stream on the basis of said information detected by said

detecting means; and

          packet generating means of generating a packet with adding said time information

generated by said time information generating means and added into every said predetermined

unit of said MPEG4 stream stored in said storing means[[.]],

          wherein order and bytes of every predetermined unit are used in generating the

time information.

32.   (Previously Presented)   The apparatus as claimed in claim 31, wherein said

detecting means detects a bit rate of said MPEG4 stream, occupancy of the data to be stored in a

buffer until a start of decoding said MPEG2-PES stream, and frame rate on said MPEG4 stream,

from said MPEG4 stream.

33.   (Previously Presented)   The apparatus as claimed in claim 32, wherein said

detecting means further detects information indicating one of I-picture, P-picture and B-picture,

information indicating how many seconds it takes from said I-picture, and information indicating

an order of reproduction, from said MPEG4 stream.

34.   (New)   An apparatus for packetizing a coded bitstream of digital data in

accordance with a transport protocol comprising:

        header detecting means of detecting a header from the coded bitstream of digital

data;

        header analyzing means of analyzing said header detected by said header

detecting means to obtain predetermined information therefrom;

        time information generating means of generating a time information in

accordance with a specification of said transport protocol using said predetermined information

obtained by said header analyzing means;

        header generating means of generating a header including said time information

generated by said time information generating means; and

packet generating means of generating a packet with said header generated by said header generating means and added into every predetermined unit of said bitstream.

35.   (New)   A method of packetizing a coded bitstream of digital data in accordance with a transport protocol comprising:

a step of detecting a header from the coded bitstream of digital data;

a step of analyzing said detected header to obtain predetermined information therefrom;

a step of generating a time information in accordance with a specification of said transport protocol using said predetermined information;

a step of generating a header including said time information; and

a step of generating a packet with said header added into every predetermined unit of said bitstream.

36.   (New)   An apparatus for packetizing a coded bitstream of digital data in accordance with a transport protocol comprising:

a stream analyzer of analyzing said coded bitstream of digital data;

a decoder of decoding at least said coded bitstream of digital data;

an arithmetic means of performing arithmetic operation on time until said decoder starts decoding said bitstream on the basis of a result of the analysis of said stream analyzer;

time information generating means of generating a time information in accordance with a specification of said transport protocol using an arithmetic result of said arithmetic means;

header generating means of generating a header including said time information

generated by said time information generating means; and

packet generating means of generating a packet with said header generated by

said header generating means and added into every predetermined unit of said bitstream.

37.   (New)   A method of packetizing a coded bitstream of digital data in

accordance with a transport protocol comprising:

a step of analyzing said coded bitstream of digital data;

a step of decoding at least said coded bitstream of digital data;

a step of performing arithmetic operation on time until said decoder starts

decoding said bitstream on the basis of a result of the analysis;

a step of generating a time information in accordance with a specification of said

transport protocol using an arithmetic result;

a step of generating a header including said time information; and

a step of generating a packet with said header added into every predetermined unit

of said bitstream.